

EFFECT OF FOOTWEAR ON Y-BALANCE TEST PERFORMANCE & RISK CATEGORISATION

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BACKGROUND

The Y-Balance Test (YBT) assesses dynamic balance and screens for injury risk. However, there are inconsistent recommendations regarding footwear use during testing.

METHODS

Forty-two volunteers (26 females, 16 males) performed the YBT with their habitual athletic footwear and barefoot on both legs. In a single-legged stance, participants reached with the contralateral limb in the anterior, posteromedial, and posterolateral directions three times.

Leg-length normalised composite scores (%) and anterior-reach differences (cm) were extracted and used to identify high-risk participants (i.e., composite score $\leq 94\%$ or anterior-reach difference ≥ 4 cm).

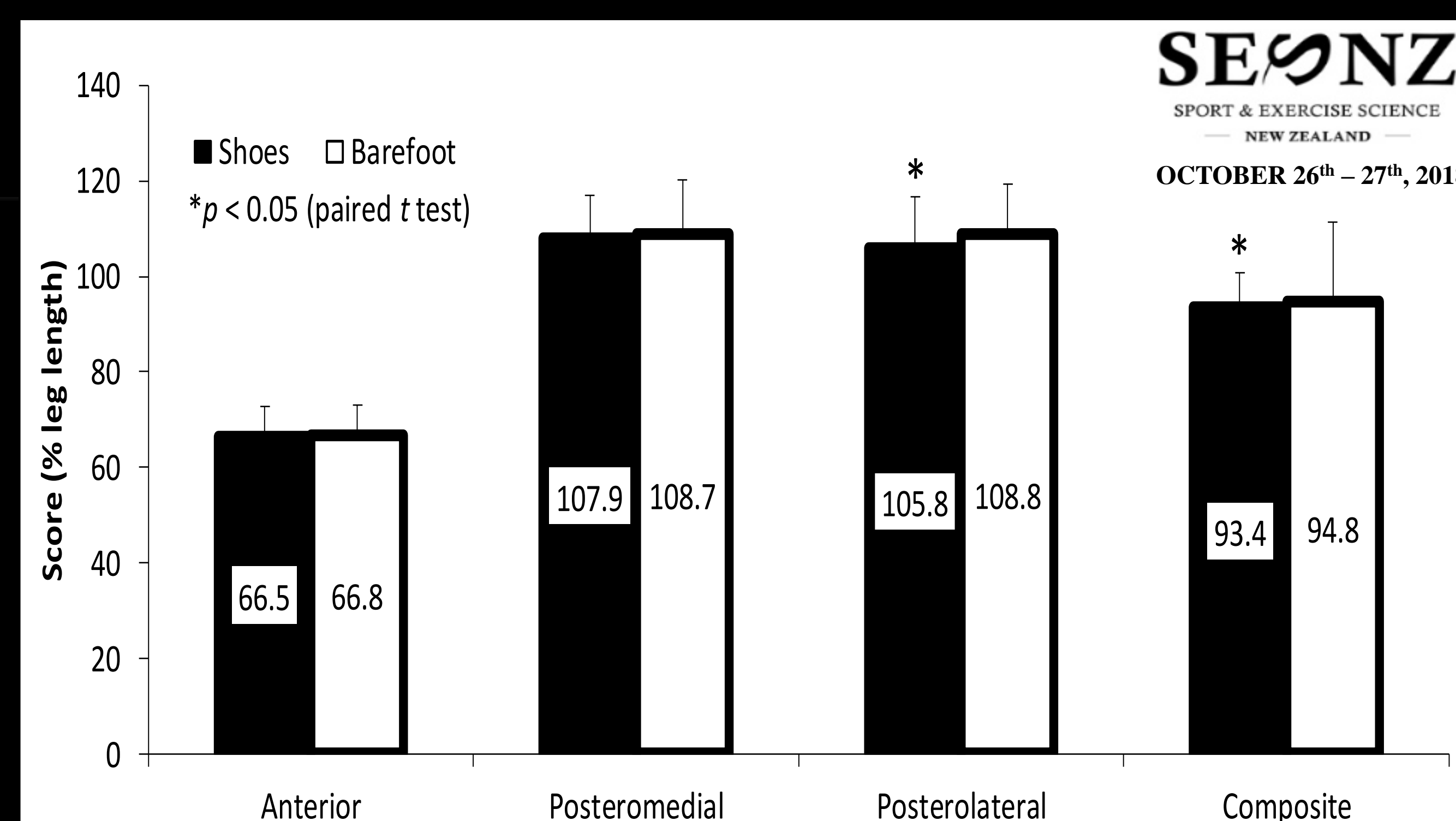


Figure 1. Differences between shod and barefoot Y-balance metrics relative to leg length

RESULTS

Anterior, posteromedial, and anterior-reach difference measures were similar between conditions.

Posterolateral (2.8 ± 7.6 cm, $p=0.001$) and composite scores (93.4 vs 94.8%, $p=0.018$) were greater barefoot.

The proportion of individuals at high-risk based on anterior-reach difference (OR: 1.6, McNear test $p=0.58$) or composite scores (OR: 2.2, $p=0.21$) was similar between conditions, although risk categorisation was inconsistent in 31 and 19% of cases, respectively.

CONCLUSION

Footwear altered the composite score such that the group average exceeded the high-risk threshold.

While testing in athletic footwear may be more valid (and barefoot easier to standardise), researchers should be aware that there is a real likelihood that risk categorisation will be affected.